

Appl. No. 10/035,681

Amdt. dated November 14, 2003

Reply to Office Action of August 15, 2003

AMENDMENTS TO THE CLAIMS

The listing of claims below replace all prior versions, and listings, of claims:

1. (Cancelled)

2. (Currently Amended) ~~The junction assembly of claim 1, further~~

comprising A junction assembly for use at a junction between a lateral branch and a main well bore, comprising:

a template having a lateral window for positioning proximal the junction;

a connector adapted to be sealably engaged to the template, a portion of the connector extending through the lateral window;

plural flow paths comprising a first flow path in communication with the lateral branch, and a second flow path in communication with a portion of the main well bore;
and

a flow control assembly coupled to the flow paths to control fluid flow through the flow paths,

wherein the template has a first engagement member, and wherein the connector has a second engagement member to engage the first engagement member, the first engagement member extending generally along a length of the template, and the second engagement member extending generally along a length of the connector.

3. (Original) The junction assembly of claim 2, wherein the flow control assembly comprises a Y-shaped flow device.

4. (Original) The junction assembly of claim 2, wherein the flow control assembly comprises valves adapted to control flow in the flow paths.

5. (Original) The junction assembly of claim 4, wherein the valves are adapted to be independently controlled.

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1 6. (Original) The junction assembly of claim 4, wherein the valves are
2 adapted to be remotely operable.

1 7. (Currently Amended) ~~The junction assembly of claim 4~~ A junction
2 assembly for use at a junction between a lateral branch and a main well bore, comprising:
3 a template having a lateral window for positioning proximal the junction,
4 the lateral window having a periphery;
5 a connector adapted to be sealably engaged to the template, a portion of
6 the connector extending through the lateral window;
7 a sealing element between the template and the connector, the sealing
8 element adapted to define a continuous fluid seal path around the periphery of the lateral
9 window; and
10 plural flow paths comprising a first flow path in communication with the
11 lateral branch, and a second flow path in communication with a portion of the main well bore,
12 wherein the plural flow paths comprise separate flow conduits.

1 8. (Original) The junction assembly of claim 7, wherein the plural flow
2 conduits are isolated from each other.

1 9. (Withdrawn) The junction assembly of claim 7, wherein the main well
2 bore extends from a well surface, and wherein the separate flow conduits extend substantially to
3 the well surface.

1 10. (Currently Amended) The junction assembly of claim ~~4~~7, wherein the
2 second flow path is adapted to extend below the junction for communication with the portion of
3 the main well bore located below the junction.

1 11. (Currently Amended) The junction assembly of claim ~~4~~7, wherein one of
2 the first and second flow paths includes an annular path around the other one of the first and
3 second flow paths.

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1 12. (Currently Amended) The junction assembly of claim ~~1~~ 7, further
2 comprising a connection assembly adapted for positioning below the junction, the connection
3 assembly adapted to sealably engage the first flow path.

1 13. (Currently Amended) The junction assembly of claim 12, wherein the first
2 flow path comprises a first flow conduit, and the connection assembly comprises a seal bore to
3 sealably receive the first flow conduit.

1 14. (Original) The junction assembly of claim 13, wherein the connection
2 assembly comprises another seal bore to sealably receive the template.

1 15. (Currently Amended) The junction assembly of claim ~~12~~ 2, wherein the
2 plural flow paths comprise plural flow conduits, and the connector has a portion having an inner
3 diameter to receive the plural flow conduits.

1 16. (Cancelled)

1 17. (Currently Amended) The method of claim ~~16~~ 18, wherein providing the
2 second flow path comprises providing the second flow path to communicate with the main bore
3 section below the junction.

1 18. (Currently Amended) ~~The method of claim 17~~ A method of completing a
2 well having a junction between a lateral branch and a main bore, comprising:
3 installing a template having a lateral window proximal the junction;
4 sealably engaging a connector to the template;
5 providing a portion of the connector through the lateral window of the
6 template; and
7 providing plural flow paths comprising a first flow path to communicate
8 with the lateral branch, and a second flow path to communicate with a main bore section,
9 wherein providing the plural flow paths comprises providing plural,
10 separate flow conduits.

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1 19. (Currently Amended) The method of claim ~~16~~18, further comprising
2 engaging a distal end of the connector with equipment in the lateral branch.

1 20. (Currently Amended) The method of claim ~~16~~18, ~~wherein the second flow~~
2 ~~path comprises a flow conduit, the method~~ further comprising providing a connection assembly
3 below the junction, and sealably engaging the flow conduit of the second flow path in the
4 connection assembly.

1 21. (Original) The method of claim 20, further comprising sealably engaging
2 the template in the connection assembly.

1 22. (Currently Amended) ~~The method of claim 16,~~ A method of completing a
2 well having a junction between a lateral branch and a main bore, comprising:
3 installing a template having a lateral window proximal the junction;
4 sealably engaging a connector to the template;
5 providing a portion of the connector through the lateral window of the
6 template; and
7 providing plural flow paths comprising a first flow path to communicate
8 with the lateral branch, and a second flow path to communicate with a main bore section,
9 wherein the plural flow paths comprise plural flow conduits, the method
10 further comprising coupling a flow control assembly to the flow conduits to control fluid flow
11 through the flow conduits,
12 wherein engaging the connector to the template is performed by engaging
13 a first engagement member of the connector to a second engagement member of the template, the
14 first engagement member extending along a length of the connector, and the second engagement
15 member extending along a length of the template.

1 23. (Original) The method of claim 22, further comprising actuating valves in
2 the flow control assembly to control fluid flow through the flow conduits.

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1 24. (Currently Amended) The method of claim 23, wherein actuating the
2 valve valves comprises independently actuating the valves.

1 25. (Currently Amended) The method of claim 23, wherein actuating the
2 valves ~~comprise~~ comprises remotely actuating the valves.

1 26. (Original) The method of claim 22, wherein coupling the flow control
2 assembly comprises coupling a Y-shaped flow device to the plural flow conduits.

1 27. (Currently Amended) The method of claim ~~1618~~, wherein providing the
2 plural flow paths comprises installing at least one flow conduit through the template.

1 28. (Withdrawn) The method of claim ~~1617~~, wherein the main bore extends
2 from a well surface, the method further comprising providing separate flow paths through the
3 flow conduits to substantially the well surface.

1 29. (Cancelled)

1 30. (Currently Amended) The completion system of claim ~~2931~~, wherein the
2 second flow path is adapted for communication with the main well bore section below the
3 junction.

1 31. (Currently Amended) ~~The completion system of claim 29 further~~
2 ~~comprising~~ A completion system comprising:
3 a lateral branch junction assembly for positioning proximal a junction of a
4 lateral branch and a main well bore and comprising a template having a lateral window and a
5 lateral branch connector adapted to sealably engage the template, a portion of the lateral branch
6 connector extending through the lateral window, the lateral window having a periphery,
7 the lateral branch junction assembly further having a sealing element
8 between the template and the connector to define a continuous fluid seal path around the
9 periphery of the lateral window.

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10 the lateral branch junction assembly further comprising at least a first flow
11 path and a second flow path, the first flow path in communication with the lateral branch, and the
12 second flow path adapted for communication with a main well bore section; and
13 a flow control system adapted to control fluid flow through the flow paths.

1 32. (Currently Amended) The completion system of claim 2931, wherein the
2 second flow path comprises a flow conduit, and the lateral branch junction assembly further
3 comprises a connection apparatus for sealably engaging the flow conduit and the template.

1 33. (Cancelled)

1 34. (New) The junction assembly of claim 7, wherein the template has a first
2 engagement member, and the connector has a second engagement member to engage the first
3 engagement member, one of the first and second engagement members comprising a tongue, and
4 the other one of the first and second engagement members comprising a groove.

1 35. (New) The junction assembly of claim 7, wherein the connector has a
2 conduit to extend into the lateral branch, the junction assembly further comprising a
3 communications line extending along the conduit and adapted to extend into the lateral branch.

1 36. (New) The junction assembly of claim 7, further comprising plural valves
2 to control flow in respective flow conduits.

1 37. (New) The junction assembly of claim 2, wherein the lateral window has a
2 first length, each of the first and second engagement members extending substantially the entire
3 first length.

1 38. (New) The junction assembly of claim 2, wherein the connector and
2 template are in engagement along a first length,
3 each of the first and second engagement members extending substantially
4 the entire first length.

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1 39. (New) The junction assembly of claim 2, wherein one of the first and
2 second engagement members comprises a tongue, and the other of the first and second
3 engagement members comprises a groove.

1 40. (New) The method of claim 18, wherein sealably engaging the connector
2 to the template comprises engaging a first engagement member of the connector to a second
3 engagement member of the template.

1 41. (New) The method of claim 40, wherein the engaging comprises engaging
2 a tongue and groove.

1 42. (New) The method of claim 22, wherein the connector and template are
2 engaged along a first length, and
3 wherein engaging the first engagement member to the second engagement
4 member comprises engaging the first engagement member to the second engagement member
5 substantially along the entire first length.